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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
MOORE, JAMES K

ART UNIT	PAPER NUMBER
2681	7

DATE MAILED: 06/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/841,396	IMMONEN ET AL.	
	Examiner	Art Unit	
	James K Moore	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 15-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 15-28 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 24 April 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in lines 8-9, "a protocol entities" should be changed to "the protocol entities", and in line 9, "the" should be inserted before "call control function".

Claim 23 is objected to because of the following informalities: in line 8, "and" should be inserted before "in order to", and "a" should be inserted before "supplementary service feature." Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 15-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 15 recites the elements "an A-interface call control protocol entity" and "an SSAP protocol entity." The specification does not describe what is meant by these terms. The examiner has proceeded to examine claims 15-22 under the assumption that these limitations will be removed.

Claims 16-22 depend on claim 15.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitations "the supplementary services" in line 8, and "the intelligent network interface" in line 10. There is insufficient antecedent basis for these limitations in the claim.

Claims 16-22 depend on claim 15.

Claims 16 and 21 recite the limitation "the triggering data." There is insufficient antecedent basis for this limitation in the claims.

Claims 17-19 recite the limitation "the message transmitted from the service control function to the call control function." There is insufficient antecedent basis for this limitation in the claims.

Claim 20 recites the limitations "the subscriber information," "the VLR," "the GSM supplementary services," "the subscriber," and "the VLR subscriber data." There is insufficient antecedent basis for these limitations in the claim.

Claim 21 recites the limitation "the intelligent network interface for call control." There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitations "the call control function" in lines 6-7 and "the intelligent network interface" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 15, 16, and 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Huotari et al. (WO 96/13949).

Regarding claim 15, Huotari discloses a method for implementing a service in a telecommunication system comprising a mobile switching center (VMSC). See Abstract. The mobile switching center is provided with a service control function (SCF) and a call control function (CCF). See Figure 2; page 9, lines 3-24; and page 10, lines 11-35. According to the method, a message related to supplementary services (intelligent network services) is transmitted to the service control function (the message being an instruction to activate an intelligent network service), and the call control function is controlled by the service control function at an intelligent network interface. See page 11, lines 11-22 and page 14, line 2 through page 15, line 16. Also according to the method,

queries are made by the call control function to obtain information (instructions) from the service control function, and instructions are received by the call control function from the service control function. See page 15, lines 1-13.

Regarding claim 16, Huotari discloses all of the limitations of claim 15, and also discloses that a reference to the service control function (a Service Key) is added to triggering data of the call control function. See page 11, line 23 through page 12, line 1, and page 14, line 2 through page 15, line 16.

Regarding claim 20, Huotari discloses all of the limitations of claim 15, and also discloses that data for triggering of intelligent network services (trigger keys) are added to subscriber information returned from a VLR to the call control function at the beginning of a call setup if any GSM supplementary services implemented via an intelligent network interface are active for a subscriber in the VLR subscriber data. See page 12, line 33 through page 13, line 28 and page 14, lines 2 through page 15, line 16.

Regarding claim 21, Huotari discloses all of the limitations of claim 15, and also discloses that an indication of those events (detection points DP) in the call control function in which it is necessary to make a service control function query is added to triggering data. See page 14, line 2 through page 15, line 16.

Regarding claim 22, Huotari discloses all of the limitations of claim 15, and also discloses that the intelligent network interface for call control is an INAP inteface. See Figure 2.

Regarding claim 23, Huotari discloses all of the limitations common to claim 15, and additionally discloses that the call control function makes the

queries and receives the instructions from the service control function in order to provide a supplementary service feature. See page 14, line 2 through page 15, line 16.

Regarding claim 24, Huotari discloses all of the limitations of claim 23, and also discloses that the mobile subscriber network may be a digital mobile subscriber network. See page 7, line 31 through page 8, line 4.

Regarding claim 25, Huotari discloses all of the limitations of claim 23, and also discloses that the mobile subscriber network may be a GSM network. See page 7, line 31 through page 8, line 4.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Pearce ("CS-2 Enhancements for User Interaction").

Regarding claim 17, Huotari discloses all of the limitations of claim 15, but does not disclose that a message transmitted from the service control function to the call control function is based on a method or message of the call control function according to CS-2. Instead, Huotari discloses that messages

transmitted from the service control function to the call control function are based on Intelligent Network Capability Set 1 (CS-1).

Pearce relates to the same field of endeavor as Huotari, i.e., intelligent network services. Pearce discloses that Intelligent Network Capability Set 2 (CS-2) provides several significant advantages over CS-1, namely, it makes more efficient use of network resources, it provides greater flexibility, and a wider repertoire of information can be communicated via signaling messages. See pages 1 and 5. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Huotari with Pearce, such that a message transmitted from the service control function to the call control function is based on a method or message of the call control function according to CS-2, in order to make more efficient use of network resources, provide greater flexibility, and provide the ability to communicate a wider repertoire of information via signaling messages.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Humphrey ("Interworking and the IN Platofrm: Detailing the Development of the GSM CAMEL Standard for Interworking IN").

Regarding claim 18, Huotari discloses all of the limitations of claim 15, but does not disclose that the message transmitted from the service control function to the call control function is based on a method or message of the call control function according to CAMEL Phase 3. Humphrey is directed to the same field of endeavor as Huotari, i.e., intelligent networks. Humphery teaches that the

CAMEL standard enables a GSM network to provide intelligent network services to subscribers. See the sections titled "INTRODUCTION" and "WHAT IS CAMEL?" Humphrey does not teach the benefits of Phase 3, however, one of ordinary skill in the art would have recognized that Phase 3 would inherently provide greater benefits than Phase 1 and 2 since it is an inherent improvement over earlier phases. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Huotari in view of Humphery, such that the message transmitted from the service control function to the call control function is based on a method or message of the call control function according to CAMEL Phase 3, in order to enable a GSM network to provide intelligent network services.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Lim et al. ("A Study on Call Modeling for AIN/B-ISDN Integration").

Regarding claim 19, Huotari discloses all of the limitations of claim 15, but does not disclose that a message transmitted from the service control function to the call control function is based on a method or message of the call control function according to AIN call party handling.

Lim is directed to the same field of endeavor as Huotari, i.e., intelligent network services. Lim teaches that AIN technology has the advantages of fast and on-demanding service deployment and network management. See Section 1, Introduction. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of the invention to modify Huotari with the teaching of Lim, such that a message transmitted from the service control function to the call control function is based on a message of the call control function according to AIN call party handling, in order to provide the telecommunication system with fast and on-demanding service deployment and network management.

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Begeja et al. (U.S. Patent No. 6,141,545).

Regarding claim 26, Huotari discloses all of the limitations of claim 23, and also discloses that the service control function is an internal software component of a service control point. See page 9, lines 3-24. Huotari does not disclose that the service control function is an internal component of the mobile switching center.

Begeja is directed to the same field of endeavor as Huotari, i.e., intelligent network services. Begeja teaches that a service control point may be integrated with a mobile switching center at a single location, thereby eliminating the need for any network being interposed between them. One of ordinary skill in the art would recognize the benefit of integrating the service control point with the mobile switching center and eliminating the network between them is that it would eliminate the cost of the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Huotari with the teaching of Begeja, such that the service control point is integrated with the mobile switching center and the service control function thereby is an internal

component of the mobile switching center, in order to reduce the cost of the system.

13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Farooqui ("An Agent-Based Model of a Distributed IN Platform").

Regarding claim 27, Huotari discloses all of the limitations of claim 23, but does not disclose that the service control function is connected to the mobile switching center via a Corba interface. Farooqui is directed to the same field of endeavor as Huotari, i.e., intelligent networks. Farooqui discloses the use of CORBA as a distributed processing layer in an intelligent network, including as an interface between a switch and a node providing a service control function. Farooqui teaches that an advantage of using a standardized distributed processing platform such as CORBA as an interface between switches and service nodes is that it allows the service nodes to be developed without regard to the type of switches used in the communications network. See pages 4, 8, and 10. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Huotari with Farooqi, such that the service control function is connected to the mobile switching center via a Corba interface, in order to allow the service control function to be developed independently of the type of mobile switching center with which it is communicating with.

14. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al. in view of Barnhouse et al. (U.S. Patent No. 6,418,461).

Regarding claim 28, Huotari discloses all of the limitations of claim 23, but does not disclose that the service control function is a Java-language execution environment. Barnhouse is directed to the same field of endeavor as Huotari, i.e., intelligent networks. Barnhouse teaches that an advantage of using a service logic execution environment (SLEE) based on the Java language is that it allows for platform portability, ubiquity of development tools and skill sets, and support for existing protocols. See col. 13, lines 20-32. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Huotari with the teaching of Barnhouse, such that the SLEE of the service control function is a Java-language execution environment, in order to allow platform portability, and provide ubiquity of development tools and skill sets and support for existing protocols.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Moore, whose telephone number is (703) 308-6042. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached at (703) 305-4778.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ken Moore

6/3/03

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application